

## SEQUENCE LISTING

<110> CNRS  
 UNIVERSITE DE RENNES I  
 UNIVERSITE PAUL SABATIER TOULOUSE III

<120> NOVEL PHOSPHORYLATED SEQUENCES OF CDC25B PHOSPHATASE, ANTIBODIES  
 DIRECTED AGAINST THESE SEQUENCES AS WELL AS THEIR USE

<130> WOB 03 BH CNR CD25

<150> FR 03/07095  
 <151> 2003-06-12

<160> 7

<170> PatentIn version 3.1

<210> 1  
 <211> 19  
 <212> PRT  
 <213> homo sapiens

<220>  
 <221> MOD\_RES  
 <222> (10)..(10)  
 <223> PHOSPHORYLATION

<400> 1  
 Thr Pro Val Gln Asn Lys Arg Arg Arg Ser Val Thr Pro Pro Glu Glu  
 1 5 10 15  
 Gln Gln Glu

<210> 2  
 <211> 14  
 <212> PRT  
 <213> homo sapiens

<220>  
 <221> MOD\_RES  
 <222> (7)..(7)  
 <223> PHOSPHORYLATION

<400> 2  
 Gln Asn Lys Arg Arg Arg Ser Val Thr Pro Pro Glu Glu Gln  
 1 5 10

<210> 3  
 <211> 566  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> MOD\_RES  
 <222> (339)..(339)  
 <223> PHOSPHORYLATION

&lt;400&gt; 3

Met Glu Val Pro Gln Pro Glu Pro Ala Pro Gly Ser Ala Leu Ser Pro  
 1 5 10 15  
 Ala Gly Val Cys Gly Gly Ala Gln Arg Pro Gly His Leu Pro Gly Leu  
 20 25 30  
 Leu Leu Gly Ser His Gly Leu Leu Gly Ser Pro Val Arg Ala Ala Ala  
 35 40 45  
 Ser Ser Pro Val Thr Thr Leu Thr Gln Thr Met His Asp Leu Ala Gly  
 50 55 60  
 Leu Gly Ser Arg Ser Arg Leu Thr His Leu Ser Leu Ser Arg Arg Ala  
 65 70 75 80  
 Ser Glu Ser Ser Leu Ser Ser Glu Ser Ser Glu Ser Ser Asp Ala Gly  
 85 90 95  
 Leu Cys Met Asp Ser Pro Ser Pro Met Asp Pro His Met Ala Glu Gln  
 100 105 110  
 Thr Phe Glu Gln Ala Ile Gln Ala Ala Ser Arg Ile Ile Arg Asn Glu  
 115 120 125  
 Gln Phe Ala Ile Arg Arg Phe Gln Ser Met Pro Val Arg Leu Leu Gly  
 130 135 140  
 His Ser Pro Val Leu Arg Asn Ile Thr Asn Ser Gln Ala Pro Asp Gly  
 145 150 155 160  
 Arg Arg Lys Ser Glu Ala Gly Ser Gly Ala Ala Ser Ser Ser Gly Glu  
 165 170 175  
 Asp Lys Glu Asn Asp Gly Phe Val Phe Lys Met Pro Trp Lys Pro Thr  
 180 185 190  
 His Pro Ser Ser Thr His Ala Leu Ala Glu Trp Ala Ser Arg Arg Glu  
 195 200 205  
 Ala Phe Ala Gln Arg Pro Ser Ser Ala Pro Asp Leu Met Cys Leu Ser  
 210 215 220  
 Pro Asp Arg Lys Met Glu Val Glu Glu Leu Ser Pro Leu Ala Leu Gly  
 225 230 235 240  
 Arg Phe Ser Leu Thr Pro Ala Glu Gly Asp Thr Glu Glu Asp Asp Gly  
 245 250 255  
 Phe Val Asp Ile Leu Glu Ser Asp Leu Lys Asp Asp Asp Ala Val Pro  
 260 265 270  
 Pro Gly Met Glu Ser Leu Ile Ser Ala Pro Leu Val Lys Thr Leu Glu  
 275 280 285  
 Lys Glu Glu Glu Lys Asp Leu Val Met Tyr Ser Lys Cys Gln Arg Leu  
 290 295 300  
 Phe Arg Ser Pro Ser Met Pro Cys Ser Val Ile Arg Pro Ile Leu Lys  
 305 310 315 320

Arg Leu Glu Arg Pro Gln Asp Arg Asp Thr Pro Val Gln Asn Lys Arg  
 325 330 335  
 Arg Arg Ser Val Thr Pro Pro Glu Glu Gln Gln Glu Ala Glu Glu Pro  
 340 345 350  
 Lys Ala Arg Val Leu Arg Ser Lys Ser Leu Cys His Asp Glu Ile Glu  
 355 360 365  
 Asn Leu Leu Asp Ser Asp His Arg Glu Leu Ile Gly Asp Tyr Ser Lys  
 370 375 380  
 Ala Phe Leu Leu Gln Thr Val Asp Gly Lys His Gln Asp Leu Lys Tyr  
 385 390 395 400  
 Ile Ser Pro Glu Thr Met Val Ala Leu Leu Thr Gly Lys Phe Ser Asn  
 405 410 415  
 Ile Val Asp Lys Phe Val Ile Val Asp Cys Arg Tyr Pro Tyr Glu Tyr  
 420 425 430  
 Glu Gly Gly His Ile Lys Thr Ala Val Asn Leu Pro Leu Glu Arg Asp  
 435 440 445  
 Ala Glu Ser Phe Leu Leu Lys Ser Pro Ile Ala Pro Cys Ser Leu Asp  
 450 455 460  
 Lys Arg Val Ile Leu Ile Phe His Cys Glu Phe Ser Ser Glu Arg Gly  
 465 470 475 480  
 Pro Arg Met Cys Arg Phe Ile Arg Glu Arg Asp Arg Ala Val Asn Asp  
 485 490 495  
 Tyr Pro Ser Leu Tyr Tyr Pro Glu Met Tyr Ile Leu Lys Gly Gly Tyr  
 500 505 510  
 Lys Glu Phe Phe Pro Gln His Pro Asn Phe Cys Glu Pro Gln Asp Tyr  
 515 520 525  
 Arg Pro Met Asn His Glu Ala Phe Lys Asp Glu Leu Lys Thr Phe Arg  
 530 535 540  
 Leu Lys Thr Arg Ser Trp Ala Gly Glu Arg Ser Arg Arg Glu Leu Cys  
 545 550 555 560  
 Ser Arg Leu Gln Asp Gln  
 565

<210> 4  
 <211> 539  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> MOD\_RES  
 <222> (312)..(312)  
 <223> PHOSPHORYLATION

&lt;400&gt; 4

Met	Glu	Val	Pro	Gln	Pro	Glu	Pro	Ala	Pro	Gly	Ser	Ala	Leu	Ser	Pro	1	5	10	15
Ala	Gly	Val	Cys	Gly	Gly	Ala	Gln	Arg	Pro	Gly	His	Leu	Pro	Gly	Leu	20	25	30	
Leu	Leu	Gly	Ser	His	Gly	Leu	Leu	Gly	Ser	Pro	Val	Arg	Ala	Ala	Ala	35	40	45	
Ser	Ser	Pro	Val	Thr	Thr	Leu	Thr	Gln	Thr	Met	His	Asp	Leu	Ala	Gly	50	55	60	
Leu	Gly	Ser	Glu	Thr	Pro	Lys	Ser	Gln	Val	Gly	Thr	Leu	Leu	Phe	Arg	65	70	75	80
Ser	Arg	Ser	Arg	Leu	Thr	His	Leu	Ser	Leu	Ser	Arg	Arg	Ala	Ser	Glu	85	90	95	
Ser	Ser	Leu	Ser	Ser	Glu	Ser	Ser	Glu	Ser	Ser	Asp	Ala	Gly	Leu	Cys	100	105	110	
Met	Asp	Ser	Pro	Ser	Pro	Met	Asp	Pro	His	Met	Ala	Glu	Gln	Thr	Phe	115	120	125	
Glu	Gln	Ala	Ile	Gln	Ala	Ala	Ser	Arg	Ile	Ile	Arg	Asn	Glu	Gln	Phe	130	135	140	
Ala	Ile	Arg	Arg	Phe	Gln	Ser	Met	Pro	Asp	Gly	Phe	Val	Phe	Lys	Met	145	150	155	160
Pro	Trp	Lys	Pro	Thr	His	Pro	Ser	Ser	Thr	His	Ala	Leu	Ala	Glu	Trp	165	170	175	
Ala	Ser	Arg	Arg	Glu	Ala	Phe	Ala	Gln	Arg	Pro	Ser	Ser	Ala	Pro	Asp	180	185	190	
Leu	Met	Cys	Leu	Ser	Pro	Asp	Arg	Lys	Met	Glu	Val	Glu	Glu	Leu	Ser	195	200	205	
Pro	Leu	Ala	Leu	Gly	Arg	Phe	Ser	Leu	Thr	Pro	Ala	Glu	Gly	Asp	Thr	210	215	220	
Glu	Glu	Asp	Asp	Gly	Phe	Val	Asp	Ile	Leu	Glu	Ser	Asp	Leu	Lys	Asp	225	230	235	240
Asp	Asp	Ala	Val	Pro	Pro	Gly	Met	Glu	Ser	Leu	Ile	Ser	Ala	Pro	Leu	245	250	255	
Val	Lys	Thr	Leu	Glu	Lys	Glu	Glu	Glu	Lys	Asp	Leu	Val	Met	Tyr	Ser	260	265	270	
Lys	Cys	Gln	Arg	Leu	Phe	Arg	Ser	Pro	Ser	Met	Pro	Cys	Ser	Val	Ile	275	280	285	
Arg	Pro	Ile	Leu	Lys	Arg	Leu	Glu	Arg	Pro	Gln	Asp	Arg	Asp	Thr	Pro	290	295	300	
Val	Gln	Asn	Lys	Arg	Arg	Arg	Ser	Val	Thr	Pro	Pro	Glu	Glu	Gln	Gln	305	310	315	320

Glu Ala Glu Glu Pro Lys Ala Arg Val Leu Arg Ser Lys Ser Leu Cys  
 325 330 335  
 His Asp Glu Ile Glu Asn Leu Leu Asp Ser Asp His Arg Glu Leu Ile  
 340 345 350  
 Gly Asp Tyr Ser Lys Ala Phe Leu Leu Gln Thr Val Asp Gly Lys His  
 355 360 365  
 Gln Asp Leu Lys Tyr Ile Ser Pro Glu Thr Met Val Ala Leu Leu Thr  
 370 375 380  
 Gly Lys Phe Ser Asn Ile Val Asp Lys Phe Val Ile Val Asp Cys Arg  
 385 390 395 400  
 Tyr Pro Tyr Glu Tyr Glu Gly Gly His Ile Lys Thr Ala Val Asn Leu  
 405 410 415  
 Pro Leu Glu Arg Asp Ala Glu Ser Phe Leu Leu Lys Ser Pro Ile Ala  
 420 425 430  
 Pro Cys Ser Leu Asp Lys Arg Val Ile Leu Ile Phe His Cys Glu Phe  
 435 440 445  
 Ser Ser Glu Arg Gly Pro Arg Met Cys Arg Phe Ile Arg Glu Arg Asp  
 450 455 460  
 Arg Ala Val Asn Asp Tyr Pro Ser Leu Tyr Tyr Pro Glu Met Tyr Ile  
 465 470 475 480  
 Leu Lys Gly Gly Tyr Lys Glu Phe Phe Pro Gln His Pro Asn Phe Cys  
 485 490 495  
 Glu Pro Gln Asp Tyr Arg Pro Met Asn His Glu Ala Phe Lys Asp Glu  
 500 505 510  
 Leu Lys Thr Phe Arg Leu Lys Thr Arg Ser Trp Ala Gly Glu Arg Ser  
 515 520 525  
 Arg Arg Glu Leu Cys Ser Arg Leu Gln Asp Gln  
 530 535

<210> 5  
 <211> 580  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> MOD\_RES  
 <222> (353)..(353)  
 <223> PHOSPHORYLATION

<400> 5  
 Met Glu Val Pro Gln Pro Glu Pro Ala Pro Gly Ser Ala Leu Ser Pro  
 1 5 10 15  
 Ala Gly Val Cys Gly Gly Ala Gln Arg Pro Gly His Leu Pro Gly Leu  
 20 25 30

Leu Leu Gly Ser His Gly Leu Leu Gly Ser Pro Val Arg Ala Ala Ala  
 35 40 45  
 Ser Ser Pro Val Thr Thr Leu Thr Gln Thr Met His Asp Leu Ala Gly  
 50 55 60  
 Leu Gly Ser Glu Thr Pro Lys Ser Gln Val Gly Thr Leu Leu Phe Arg  
 65 70 75 80  
 Ser Arg Ser Arg Leu Thr His Leu Ser Leu Ser Arg Arg Ala Ser Glu  
 85 90 95  
 Ser Ser Leu Ser Ser Glu Ser Ser Glu Ser Ser Asp Ala Gly Leu Cys  
 100 105 110  
 Met Asp Ser Pro Ser Pro Met Asp Pro His Met Ala Glu Gln Thr Phe  
 115 120 125  
 Glu Gln Ala Ile Gln Ala Ala Ser Arg Ile Ile Arg Asn Glu Gln Phe  
 130 135 140  
 Ala Ile Arg Arg Phe Gln Ser Met Pro Val Arg Leu Leu Gly His Ser  
 145 150 155 160  
 Pro Val Leu Arg Asn Ile Thr Asn Ser Gln Ala Pro Asp Gly Arg Arg  
 165 170 175  
 Lys Ser Glu Ala Gly Ser Gly Ala Ala Ser Ser Ser Gly Glu Asp Lys  
 180 185 190  
 Glu Asn Asp Gly Phe Val Phe Lys Met Pro Trp Lys Pro Thr His Pro  
 195 200 205  
 Ser Ser Thr His Ala Leu Ala Glu Trp Ala Ser Arg Arg Glu Ala Phe  
 210 215 220  
 Ala Gln Arg Pro Ser Ser Ala Pro Asp Leu Met Cys Leu Ser Pro Asp  
 225 230 235 240  
 Arg Lys Met Glu Val Glu Glu Leu Ser Pro Leu Ala Leu Gly Arg Phe  
 245 250 255  
 Ser Leu Thr Pro Ala Glu Gly Asp Thr Glu Glu Asp Asp Gly Phe Val  
 260 265 270  
 Asp Ile Leu Glu Ser Asp Leu Lys Asp Asp Asp Ala Val Pro Pro Gly  
 275 280 285  
 Met Glu Ser Leu Ile Ser Ala Pro Leu Val Lys Thr Leu Glu Lys Glu  
 290 295 300  
 Glu Glu Lys Asp Leu Val Met Tyr Ser Lys Cys Gln Arg Leu Phe Arg  
 305 310 315 320  
 Ser Pro Ser Met Pro Cys Ser Val Ile Arg Pro Ile Leu Lys Arg Leu  
 325 330 335  
 Glu Arg Pro Gln Asp Arg Asp Thr Pro Val Gln Asn Lys Arg Arg Arg  
 340 345 350

Ser Val Thr Pro Pro Glu Glu Gln Gln Glu Ala Glu Glu Pro Lys Ala  
 355 360 365  
 Arg Val Leu Arg Ser Lys Ser Leu Cys His Asp Glu Ile Glu Asn Leu  
 370 375 380  
 Leu Asp Ser Asp His Arg Glu Leu Ile Gly Asp Tyr Ser Lys Ala Phe  
 385 390 395 400  
 Leu Leu Gln Thr Val Asp Gly Lys His Gln Asp Leu Lys Tyr Ile Ser  
 405 410 415  
 Pro Glu Thr Met Val Ala Leu Leu Thr Gly Lys Phe Ser Asn Ile Val  
 420 425 430  
 Asp Lys Phe Val Ile Val Asp Cys Arg Tyr Pro Tyr Glu Tyr Glu Gly  
 435 440 445  
 Gly His Ile Lys Thr Ala Val Asn Leu Pro Leu Glu Arg Asp Ala Glu  
 450 455 460  
 Ser Phe Leu Leu Lys Ser Pro Ile Ala Pro Cys Ser Leu Asp Lys Arg  
 465 470 475 480  
 Val Ile Leu Ile Phe His Cys Glu Phe Ser Ser Glu Arg Gly Pro Arg  
 485 490 495  
 Met Cys Arg Phe Ile Arg Glu Arg Asp Arg Ala Val Asn Asp Tyr Pro  
 500 505 510  
 Ser Leu Tyr Tyr Pro Glu Met Tyr Ile Leu Lys Gly Gly Tyr Lys Glu  
 515 520 525  
 Phe Phe Pro Gln His Pro Asn Phe Cys Glu Pro Gln Asp Tyr Arg Pro  
 530 535 540  
 Met Asn His Glu Ala Phe Lys Asp Glu Leu Lys Thr Phe Arg Leu Lys  
 545 550 555 560  
 Thr Arg Ser Trp Ala Gly Glu Arg Ser Arg Arg Glu Leu Cys Ser Arg  
 565 570 575  
 Leu Gln Asp Gln  
 580

<210> 6  
 <211> 601  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> MOD\_RES  
 <222> (374)..(374)  
 <223> PHOSPHORYLATION

<400> 6  
 Met Glu Val Pro Gln Pro Glu Pro Ala Pro Gly Ser Ala Leu Ser Pro  
 1 5 10 15

Ala Gly Val Cys Gly Gly Ala Gln Arg Pro Gly His Leu Pro Gly Leu  
 20 25 30  
 Leu Leu Gly Ser His Gly Leu Leu Gly Ser Pro Val Arg Ala Ala Ala  
 35 40 45  
 Ser Ser Pro Val Thr Thr Leu Thr Gln Thr Met His Asp Leu Ala Gly  
 50 55 60  
 Leu Gly Ser Arg Ser Arg Leu Thr His Leu Ser Leu Ser Arg Arg Ala  
 65 70 75 80  
 Ser Glu Ser Ser Leu Ser Ser Glu Ser Ser Glu Ser Ser Asp Ala Gly  
 85 90 95  
 Leu Cys Met Asp Ser Pro Ser Pro Met Asp Pro His Met Ala Glu Gln  
 100 105 110  
 Thr Phe Glu Gln Ala Ile Gln Ala Ala Ser Arg Ile Ile Arg Asn Glu  
 115 120 125  
 Gln Phe Ala Ile Arg Arg Phe Gln Ser Met Pro Val Arg Leu Leu Gly  
 130 135 140  
 His Ser Pro Val Leu Arg Asn Ile Thr Asn Ser Gln Ala Pro Asp Gly  
 145 150 155 160  
 Arg Arg Lys Ser Glu Ala Gly Ser Gly Ala Ala Ser Ser Ser Gly Glu  
 165 170 175  
 Asp Lys Glu Asn Val Arg Phe Trp Lys Ala Gly Val Gly Ala Leu Arg  
 180 185 190  
 Glu Glu Glu Gly Ala Cys Trp Gly Gly Ser Leu Ala Cys Glu Asp Pro  
 195 200 205  
 Pro Leu Pro Ser Trp Leu Gln Asp Gly Phe Val Phe Lys Met Pro Trp  
 210 215 220  
 Lys Pro Thr His Pro Ser Ser Thr His Ala Leu Ala Glu Trp Ala Ser  
 225 230 235 240  
 Arg Arg Glu Ala Phe Ala Gln Arg Pro Ser Ser Ala Pro Asp Leu Met  
 245 250 255  
 Cys Leu Ser Pro Asp Arg Lys Met Glu Val Glu Glu Leu Ser Pro Leu  
 260 265 270  
 Ala Leu Gly Arg Phe Ser Leu Thr Pro Ala Glu Gly Asp Thr Glu Glu  
 275 280 285  
 Asp Asp Gly Phe Val Asp Ile Leu Glu Ser Asp Leu Lys Asp Asp Asp  
 290 295 300  
 Ala Val Pro Pro Gly Met Glu Ser Leu Ile Ser Ala Pro Leu Val Lys  
 305 310 315 320  
 Thr Leu Glu Lys Glu Glu Glu Lys Asp Leu Val Met Tyr Ser Lys Cys  
 325 330 335



Gln Arg Leu Phe Arg Ser Pro Ser Met Pro Cys Ser Val Ile Arg Pro  
 340 345 350  
 Ile Leu Lys Arg Leu Glu Arg Pro Gln Asp Arg Asp Thr Pro Val Gln  
 355 360 365  
 Asn Lys Arg Arg Arg Ser Val Thr Pro Pro Glu Glu Gln Gln Glu Ala  
 370 375 380  
 Glu Glu Pro Lys Ala Arg Val Leu Arg Ser Lys Ser Leu Cys His Asp  
 385 390 395 400  
 Glu Ile Glu Asn Leu Leu Asp Ser Asp His Arg Glu Leu Ile Gly Asp  
 405 410 415  
 Tyr Ser Lys Ala Phe Leu Leu Gln Thr Val Asp Gly Lys His Gln Asp  
 420 425 430  
 Leu Lys Tyr Ile Ser Pro Glu Thr Met Val Ala Leu Leu Thr Gly Lys  
 435 440 445  
 Phe Ser Asn Ile Val Asp Lys Phe Val Ile Val Asp Cys Arg Tyr Pro  
 450 455 460  
 Tyr Glu Tyr Glu Gly Gly His Ile Lys Thr Ala Val Asn Leu Pro Leu  
 465 470 475 480  
 Glu Arg Asp Ala Glu Ser Phe Leu Leu Lys Ser Pro Ile Ala Pro Cys  
 485 490 495  
 Ser Leu Asp Lys Arg Val Ile Leu Ile Phe His Cys Glu Phe Ser Ser  
 500 505 510  
 Glu Arg Gly Pro Arg Met Cys Arg Phe Ile Arg Glu Arg Asp Arg Ala  
 515 520 525  
 Val Asn Asp Tyr Pro Ser Leu Tyr Tyr Pro Glu Met Tyr Ile Leu Lys  
 530 535 540  
 Gly Gly Tyr Lys Glu Phe Phe Pro Gln His Pro Asn Phe Cys Glu Pro  
 545 550 555 560  
 Gln Asp Tyr Arg Pro Met Asn His Glu Ala Phe Lys Asp Glu Leu Lys  
 565 570 575  
 Thr Phe Arg Leu Lys Thr Arg Ser Trp Ala Gly Glu Arg Ser Arg Arg  
 580 585 590  
 Glu Leu Cys Ser Arg Leu Gln Asp Gln  
 595 600

<210> 7  
 <211> 588  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> MOD\_RES  
 <222> (361)..(361)

## &lt;223&gt; PHOSPHORYLATION

&lt;400&gt; 7

Met Glu Val Pro Gln Pro Glu Pro Ala Pro Gly Ser Ala Leu Ser Pro  
1 5 10 15

Ala Gly Val Cys Gly Gly Ala Gln Arg Pro Gly His Leu Pro Gly Leu  
20 25 30

Leu Leu Gly Ser His Gly Leu Leu Gly Ser Pro Val Arg Ala Ala Ala  
35 40 45

Ser Ser Pro Val Thr Thr Leu Thr Gln Thr Met His Asp Leu Ala Gly  
50 55 60

Leu Gly Ser Glu Thr Pro Lys Ser Gln Val Gly Thr Leu Leu Phe Arg  
65 70 75 80

Ser Arg Ser Arg Leu Thr His Leu Ser Leu Ser Arg Arg Ala Ser Glu  
85 90 95

Ser Ser Leu Ser Ser Glu Ser Ser Glu Ser Ser Asp Ala Gly Leu Cys  
100 105 110

Met Asp Ser Pro Ser Pro Met Asp Pro His Met Ala Glu Gln Thr Phe  
115 120 125

Glu Gln Ala Ile Gln Ala Ala Ser Arg Ile Ile Arg Asn Glu Gln Phe  
130 135 140

Ala Ile Arg Arg Phe Gln Ser Met Pro Val Arg Leu Leu Gly His Ser  
145 150 155 160

Pro Val Leu Arg Asn Ile Thr Asn Ser Gln Ala Pro Asp Gly Arg Arg  
165 170 175

Lys Ser Glu Ala Gly Ser Gly Ala Ala Ser Ser Ser Gly Glu Asp Lys  
180 185 190

Glu Asn Val Arg Phe Trp Lys Ala Gly Val Gly Ala Leu Arg Glu Glu  
195 200 205

Glu Gly Ala Cys Trp Gly Gly Ser Leu Ala Cys Glu Asp Pro Pro Leu  
210 215 220

Pro Ser Trp Leu Gln Asp Gly Phe Val Phe Lys Met Pro Trp Lys Pro  
225 230 235 240

Thr His Pro Ser Ser Thr His Ala Leu Ala Glu Trp Ala Ser Arg Arg  
245 250 255

Glu Ala Phe Ala Gln Arg Pro Ser Ser Ala Pro Asp Leu Met Cys Leu  
260 265 270

Ser Pro Asp Arg Lys Met Glu Val Glu Glu Leu Ser Pro Leu Ala Leu  
275 280 285

Gly Arg Phe Ser Leu Thr Pro Ala Glu Gly Asp Thr Glu Glu Asp Asp  
290 295 300

Gly Phe Val Asp Ile Leu Glu Ser Asp Leu Lys Asp Leu Val Met Tyr

305		310		315		320
Ser Lys Cys Gln Arg Leu Phe Arg Ser Pro Ser Met Pro Cys Ser Val						
		325		330		335
Ile Arg Pro Ile Leu Lys Arg Leu Glu Arg Pro Gln Asp Arg Asp Thr						
		340		345		350
Pro Val Gln Asn Lys Arg Arg Arg Ser Val Thr Pro Pro Glu Glu Gln						
		355		360		365
Gln Glu Ala Glu Glu Pro Lys Ala Arg Val Leu Arg Ser Lys Ser Leu						
		370		375		380
Cys His Asp Glu Ile Glu Asn Leu Leu Asp Ser Asp His Arg Glu Leu						
		385		390		400
Ile Gly Asp Tyr Ser Lys Ala Phe Leu Leu Gln Thr Val Asp Gly Lys						
		405		410		415
His Gln Asp Leu Lys Tyr Ile Ser Pro Glu Thr Met Val Ala Leu Leu						
		420		425		430
Thr Gly Lys Phe Ser Asn Ile Val Asp Lys Phe Val Ile Val Asp Cys						
		435		440		445
Arg Tyr Pro Tyr Glu Tyr Glu Gly Gly His Ile Lys Thr Ala Val Asn						
		450		455		460
Leu Pro Leu Glu Arg Asp Ala Glu Ser Phe Leu Leu Lys Ser Pro Ile						
		465		470		475
Ala Pro Cys Ser Leu Asp Lys Arg Val Ile Leu Ile Phe His Cys Glu						
		485		490		495
Phe Ser Ser Glu Arg Gly Pro Arg Met Cys Arg Phe Ile Arg Glu Arg						
		500		505		510
Asp Arg Ala Val Asn Asp Tyr Pro Ser Leu Tyr Tyr Pro Glu Met Tyr						
		515		520		525
Ile Leu Lys Gly Gly Tyr Lys Glu Phe Phe Pro Gln His Pro Asn Phe						
		530		535		540
Cys Glu Pro Gln Asp Tyr Arg Pro Met Asn His Glu Ala Phe Lys Asp						
		545		550		555
Glu Leu Lys Thr Phe Arg Leu Lys Thr Arg Ser Trp Ala Gly Glu Arg						
		565		570		575
Ser Arg Arg Glu Leu Cys Ser Arg Leu Gln Asp Gln						
		580		585		